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Examining Challenges and Prospects Associated with Implementing Legal Protections for Electronic Governances: A Generic Perspective from Developing Country

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ABSTRACT

On a worldwide scale, information and communication technologies are undergoing fundamental shifts, and research has been done to investigate the mechanisms between e-government and e-governance in light of these informational and technological shifts. There have been many discussions about different e-governance case studies, and the distinctions between e-governance and e-government, as well as their respective benefits, have been aptly investigated from the point of view of government implementation. This current paper also focuses on deploying an e-governance mechanism and addressing the difficulties and constraints involved. Finally, practical problems regarding the adoption of e-governance have been addressed by online administration and Internet legislation. Future research has to focus on legitimate challenges and how they statistically relate to e-governance and artificial intelligence in various public and commercial institutions.

KEYWORDS

e-governance, e-government, legislation

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Examinando desafios e perspectivas associados à implementação de proteções legais para governanças eletrônicas: uma perspectiva genérica de um país em desenvolvimento

RESUMO

Em escala mundial, as tecnologias de informação e comunicação estão passando por mudanças fundamentais. Pesquisas foram feitas para investigar o mecanismo entre governo eletrônico e governança eletrônica à luz dos mencionados acima. Tem havido muitas discussões sobre diferentes estudos de caso de governança eletrônica. As distinções entre governança eletrônica e governo eletrônico, bem como seus respectivos benefícios, foram investigadas do ponto de vista da implementação governamental. Este trabalho de investigação atual também se concentrou na implantação de um mecanismo de governança eletrônica e abordou as dificuldades e constrangimentos envolvidos. Finalmente, os problemas práticos relativos à adoção da governança eletrônica foram abordados pela administração online e pela legislação da Internet. A investigação futura terá de se concentrar nos desafios legítimos e na forma como estes se relacionam estatisticamente com a governança eletrônica e a inteligência artificial em diversas instituições públicas e comerciais.

PALAVRAS-CHAVE

governança eletrônica, governo eletrônico, legislação

1. INTRODUCTION

Information and communication technologies are transforming on a global scale. The increase in utilization of Internet-connected devices has profoundly impacted how we do business, acquire knowledge, and socialize. The benefits of e-government are becoming increasingly apparent to governments worldwide. Efficient e-government saves money for citizens, businesses, and the government itself and makes it easier to comply with regulations set by the government. It also increases citizen participation and faith in the government. Thus, it is not unexpected that policymakers and managers in nations worldwide—from the most developed to the least developing—are eager to adopt e-government. E-governance, or electronic governance, applies information technology techniques to deliver government services, allow information exchange, enable communication transactions, and integrate disparate systems across multiple government sectors (Guida & Crow, 2009). E-governance encompasses the various forms of contact that occur between the government and different stakeholders, such as people (G2C), businesses (G2B), other government entities (G2G), and employees (G2E) (Alazzam et al., 2020a; Palvia & Sharma, 2007).

There has been a lot of excitement about the potential of electronic governance (sometimes called e-governance or digital governance) to revolutionize the delivery of public services and the efficiency of government (Fatile, 2012). The administrative processes and exchanges within the larger government framework are also included rather than acting as a paradigm shift in the government institutions (Asogwa, 2013). Electronic governance in developing nations presents an opportunity to tackle governance concerns, diminish corruption, enhance transparency, and empower individuals (Ndou, 2004). E-governance in enterprises entails the utilization of digital technology and electronic platforms to augment governance processes, boost transparency, and optimize operations within firms (Jain & Bagga, 2021). Legal protection is essential in this

environment to preserve the interests of both firms and persons engaged in e-governance activities (Alazzam & Alshunnaq, 2023; Mahajan, 2015; Paskaleva-Shapira, 2006).

In the light of the above discussion, this article revolves around a discussion regarding the two major concepts, one of which is e-governance, and the other one is e-government. E-governance is the mechanism based on information technology to direct and regulate e-government initiatives and activities. Thus, e-governance is a big umbrella and requires due diligence on behalf of government organizations. The literature review of this current article sheds light on the differences between both terms, i.e., e-governance and e-government, along with the challenges and prospects discussed which is also an objective on which the article is framed.

2. LITERATURE REVIEW

2.1. E-GOVERNMENT VS E-GOVERNANCE

A government (from Greek κυβερνήτης *kubernites*, meaning steersman, governor, pilot, or rudder) is an entity that makes and enforces laws for a certain territory (Godse & Garg, 2007). E-government streamlines or improves government business with technology. E-Government focuses on developing online citizen services rather than government services like e-tax, e-transportation, or e-health. E-governance encompasses all government ICT links and networks (Godse & Garg, 2007; Ntulo & Otiike, 2013). E-Governance is a broader concept that defines and assesses how technologies affect government practice and administration and public servants' relationships with elected bodies, NGOs, and private sector corporations (Al Azzam, 2019; Grigalashvili, 2022). It and new business procedures improve E-government connections with residents and businesses. The World Bank claims that government agencies use wide area networks, the Internet, and mobile computing to improve relations with citizens, enterprises, and other agencies.

E-Government has lower costs, corruption, convenience, revenue, and openness. E-government requires a functioning government, governance procedures, resources, driver consensus, and political leadership. Government stakeholders include citizens, corporations, employees, departments, agencies, union leaders, community leaders, politicians, and foreign investors. Governance shapes politics, policy, and programs. E-government elements include: Electronic Voting, Electronic service delivery, Electronic workflow, and gauging electronic productivity.

E-Governance alters and supports governance processes and structures using ICT. Government agencies improve ties with residents, corporations, and other agencies via IT. Decisions, leadership, organizational arrangements, resource allocation, accountability, and success measurement are part of e-Governance (Myeong & Bokhari, 2023). Telecommunications, internal agency systems, cross-government systems, multiple services delivery networks approach, internet connectivity, and skilled individuals are needed, as per the study conducted in Denmark (Alazzam et al., 2023; Meyerhoff Nielsen & Ben Dhaou, 2023). Better government service delivery, business-industry ties, public empowerment through information access, and more effective government administration are expected. Benefits include transparency, convenience, less corruption, income growth, and fewer government costs (Alazzam et al., 2020b; Chen & Ye, 2023; Saleh et al., 2020). E-governance includes electronic engagement, consultation, controllership, and networked societal guidance through the effective utilization of artificial intelligence (Samuel et al., 2023). Electronic governance involves a variety of digital technologies to improve government operations and services. Roztocki et al. (2023) proposed that e-administration, e-services, and e-participation are the major pillars of these activities. Electronic administration streamlines government operations

and improves internal processes. Online access to public services, including e-health, education, and commerce, is e-services. E-participation promotes citizen participation on social media and government portals (Figure 1).

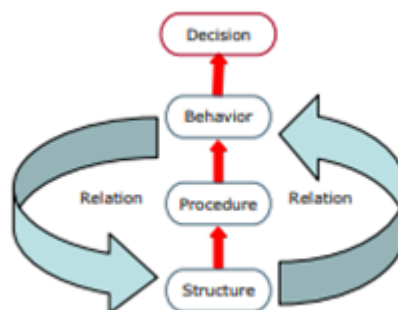


Figure 1. Key dimensions of E-governance. Source:(Saadoun & Yanning 2015)

2.2. BENEFITS AND OPPORTUNITIES

The potential benefits of electronic governance in developing countries have been the subject of many studies in recent years (Fernández et al., 2023). Among them are opportunities for economic growth in the digital economy, increased efficiency, less administrative expenses, better transparency, and simpler access to government services, as per the evidence collected from Chinese provinces by the researchers (Al Azzam et al., 2023; Yin & Song, 2023). There are also opportunities for economic growth in the analog sector. As witnessed in the Nigerian E e-governance system, scientists like John (2023) proposed that E-governance has shown itself to be a useful instrument in the battle against corruption since it does away with the requirement that individuals interact directly with government representatives. It is anticipated that e-governance in developing nations will conform to the following future trends as a result of the ongoing development of technology (Al Droua et al., 2020; Myeong & Bokhari, 2023):

- a. **Mobile Access:** As the use of mobile devices continues to grow, there is a good chance that mobile-centric e-governance solutions will be developed in the banking system of Vietnam (Tien, 2023). These solutions will make electronic banking services more available to a larger population.
- b. **Big Data and Analytics:** It is anticipated that data-driven decision-making and predictive analytics would improve both the delivery of services and the formulation of policies (Olaniyi et al., 2023).
- c. **The Technology of Blockchain:** Blockchain can potentially increase transparency and security in the transactions and record-keeping of government-related institutions (Kademteme & Bvuma, 2023).
- d. **Chatbots and Artificial Intelligence:** The usage of chatbots driven by AI can increase citizen interactions and streamline the delivery of services (López-Sánchez et al., 2023). One prime example are the human/AI interactions witnessed in Norway, where chat-based customer services have been provided to the population (Vassilakopoulou et al., 2023).

Despite various benefits and opportunities, E-governance and its linkage with legal protection bring various challenges for the masses, as mentioned below.

2.3. CHALLENGES

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Major e-governance and legal protection difficulties generated alarms in government corridors for designing policies that concern the populace yet address security, compliance, regulations, and the digital divide (Mehta, 2023). Data security, privacy, and cyber dangers arise from the growing use of digital platforms for governance. Protecting sensitive data is difficult (Allahrakha, 2023). According to Afenyo and Caesar (2023), businesses must navigate a complicated web of legal and regulatory obligations, which must be met on national and international levels and can be a burden—maritime cyber security threats, for example.

According to Newa (2021), the lack of widespread access to digital technologies can make e-governance programs more likely to worsen existing social and economic gaps. One of the most pressing problems we face today is the “digital gap,” which includes disparities in access to and proficiency with digital technologies and media (Newa, 2021). Due to these differences, participation in and access to the advantages of e-governance initiatives may be unequal. Many underdeveloped countries lack the necessary infrastructure, such as constant access to the Internet and power, to back up ambitious attempts to introduce e-governance (Banerjee & Chau, 2004; Myeong & Bokhari, 2023). Worries about data privacy and cybersecurity are crucial in European countries (van Kessel et al., 2023).

When data protection standards are loose, and security measures are inadequate, public trust in electronic governmental services can be eroded (Strauß, 2023). Training enough people to manage and maintain e-governance infrastructure is difficult. Training for government employees, policymakers, and the general public is required. Several examples show how governments in developing countries have successfully implemented technological solutions. Estonia is often said to be at the forefront of e-governance because of its digital identity system and extensive online services (Himma-Kadakas & Kóuts-Klemm, 2023). There is a lot that other developing countries can take away from these cases.

The adoption and success of e-governance initiatives in underdeveloped countries may be hampered by political resistance, bureaucratic lethargy, and cultural variables such as entrepreneurial abilities, organizational change etc (Himma-Kadakas & Kóuts-Klemm, 2023).

2.4. E-GOVERNANCE IMPLEMENTATION

There are several obstacles to overcome before the promise of electronic government can be realized, which can slow down the implementation progress, as witnessed in China observing the cases of financial debts (Yan & Lyu, 2023). Aldewachi (2023) highlighted the issues and challenges faced by e-management in Iraq. Because of the diversity and complexity of e-government efforts, a wide variety of obstacles and challenges must be overcome before they can be successfully implemented and managed.

2.4.1. Technological Challenges

The adoption of e-government programs faces technological challenges, such as a lack of interoperable standardized practices and infrastructure across departments and agencies (Zejnnullahu et al., 2023). The lack of adequate ICT infrastructure is widely acknowledged as one of the most significant obstacles facing e-government as per the e-government comparative index in South Asian countries studied by (Younus et al., 2023).

Internetworking is essential because it enables proper information sharing, opens up new communication channels, and opens the door to delivering new services (Ndou, 2004). An architecture that provides a common guiding set of concepts, models, and standards is required to transition to electronic governance. According to Sharma and Gupta (2003), the successful implementation of the entire e-government framework necessitates the existence of a robust technological infrastructure. Therefore, for the government to provide e-government services, it is necessary for the government to create an efficient telecommunications infrastructure.

2.4.2. Security and Secrecy

Electronic government deployment has significant privacy and security challenges (Yang et al., 2019). According to Basu (2004), the term “privacy” refers to the guarantee of adequate protection for information that may be attributed to a specific individual. According to Sharma and Gupta (2003), the government has a responsibility to protect the rights of its citizens concerning matters of privacy, including the processing and collection of personal data, solely for appropriate reasons. Concerns around the tracking of users on websites, the exchange of information, and the revealing of private information or improper handling are universal. There is also the worry that the electronic government itself would be utilised to spy on residents and infringe their privacy in some way. When addressing the issue of privacy within the framework of e-government, both technical and policy remedies may be required (Manda & Backhouse, 2016). In addition, there is a need to effectively respond to network privacy issues to boost public confidence in using e-government services. This is necessary to promote the usage of e-government services. It is crucial to the success of e-government apps that citizens have faith that any personal information they share with governmental organizations will be kept private and handled carefully. According to Parker (2012), security protects information and systems from being inadvertently or intentionally disclosed, having unauthorized access, or being modified or destroyed without authorization (Parker, 2012). It refers to safeguarding the information architecture, which encompasses the network, the hardware, and the software assets, as well as the management of who can access the information itself. According to Sharma and Gupta’s research from 2003, security can be broken down into two distinct categories: network security and document security. It should involve both maintenance and the protection of the electronic infrastructure, which might take the shape of firewalls and limit the number of people who can access the data. In addition, the utilization of security technology, such as digital signatures and encryption, to protect user IDs, passwords, credit card numbers, bank account numbers, and other such data while it is being transmitted over the Internet and stored electronically is essential to achieving the desired level of security in e-government applications (Fang, 2002).

2.4.3. Concerns about policies and regulations

The problem with e-government is not one of a technical nature but rather one of an organizational nature (Heeks, 2005). The implementation of e-government principles and functions requires a variety of new rules, policies, laws, and changes to government to address electronic activities such as electronic archiving, electronic signatures, transmission of information, data protection, computer crime, intellectual property rights, and issues about copyright (Alshehri & Drew, 2010). Dealing with the government requires signing a contract or a digital agreement, both of which need to be safeguarded and acknowledged by codified legislation that is designed to protect and secure the types of actions or procedures involved in dealing with the e-government

(Ntulo & Otiike, 2013). Numerous nations worldwide still have not enacted any rules regarding online commerce or online administration (Massetot & Maymont, 2014). To ensure, among other things, the privacy of electronic interactions and electronic signatures, security of those interactions, and legal recognition of those signatures, it will be necessary to establish protections and change laws (Basu, 2004).

2.4.4. Insufficient Number of Qualified Employees and Lack of Training

Lack of information and communication technology (ICT) expertise can be another significant obstacle to an e-government endeavor (Glyptis et al., 2020). This problem is especially prevalent in developing countries, which have struggled for years with an ongoing shortage of competent people, as well as inadequate training for their human resource personnel (Okwueze, 2010). It is necessary to have access to the relevant skills to deploy e-government successfully. E-government necessitates the development of human capacities in the areas of technology, business, and management (Ndou, 2004). It is mandatory to have the technical abilities necessary for implementing, maintaining, designing, and installing ICT infrastructure, as well as the skills necessary for utilizing and managing online processes, functions, and clients (Alshehri & Drew, 2010).

2.4.5. The Phenomenon of “Digital Divide”

The capacity to utilize computers and the internet has evolved into a critical success factor in the implementation of e-government, and the absence of such abilities may result in social marginalization or even exclusion. The term “digital divide” refers to the disparity in opportunities between people who have access to the Internet and those who do not (Van Dijk & Hacker, 2003). Those unable to connect to the internet will be unable to use the services offered online. The term “digital divide” refers to the fact that not all citizens today have equal access to computers and the internet (Vartanova & Gladkova, 2019). This could be due to a lack of financial means, requisite skills, or another reason. Literacy in the use of computers is necessary for individuals to be able to make use of e-government applications (Van Deursen et al., 2006). To allow citizens and government employees to participate in creating e-government apps, the government should train residents and government employees in the fundamentals of using computers and the internet. In addition, the inability to access the internet among citizens who are vulnerable or have low incomes prohibits these individuals from being able to participate in archiving, electronic signatures, the transmission of information, data protection, computer crime, intellectual property rights, and copyright difficulties (Mahajan, 2015).

Dealing with e-government requires signing a contract or a digital agreement, both of which need to be safeguarded and acknowledged by codified legislation that safeguards and secures the kinds of actions or procedures involved in dealing with e-government, as highlighted in one of the comparative studies undertaken by (Wu, 2014). Many nations still have not performed any e-legislation regarding online commerce or online administration of public affairs (Duvivier, 2013). It will be necessary to establish protections and improvements in the law to ensure, among other things, the privacy, security, and legal recognition of electronic interactions and electronic signatures.

2.4.6. Leadership and Managerial Backing

Research indicates that the likelihood of an invention being embraced is diminished in the absence of endorsement from upper-level executives. Hence, the successful adoption of e-government necessitates the endorsement of the highest echelons of government. Top management support

entails senior executives' dedication to creating a favorable atmosphere that fosters engagement in e-government applications (Scholl, 2003). Hence, it has a crucial impact on the acceptance and execution of e-government (Ndou, 2004).

3. LEGAL ISSUES ABOUT E-GOVERNANCE

The credibility of e-government is contingent upon the adherence to established standards and shared regulations. The exercise of political and administrative power must adhere to the standards imposed on all Internet users, including self-regulation and compliance with national and international legislations.

3.1. SELF-REGULATION

Self-regulation is an alternative conflict resolution method in which the people are expected to follow the law or behave and set the standards themselves or through representation. In self-regulation, actors create and follow rules to organize themselves. In this paradigm, the state's role is reduced to designing the judicial framework. First, the global and decentralized network makes state involvement worthless because state-enforced laws are ambiguous.

Second, some state actions are no longer justified as some causes disappear, and numerical technologies allow a fine inspection of ways to access information. Self-regulation takes many forms, and the government, like internet users, must follow them (Gibbons, 1996). E-government must adhere to the same rules imposed on internet users when exercising political and administrative power via ICT (Homburg, 2008). In reality, most websites require users to provide their full name and email address to gain access, making it easier for e-governors to compile client databases and newsletter lists. Now, analysis and use of gathered information can be detrimental to the internet user's privacy, especially since it often results in unsolicited mailings or spamming. As the internet has grown, new self-regulatory rules have been enacted, most notably in privacy protection, online shopping, advertising, workplace ethics, and restricting access to potentially harmful content (Hirsch, 2010). Contracts, codes of conduct, ethical guidelines, product labeling, device filters, etc., were all examples of market actors' and users' initiatives that took many different shapes (Price et al., 2005).

Reidenberg coined the phrase "Lex Information" to argue that technological advancements impose rules that policymakers should consider since legislation is ineffective if it is not attentive to these developments. The first self-regulatory entity on the internet emerged from the formulation of conduit rules by its founders, who were part of a rather homogeneous community—The IETF (Internet Engineering Task Forces), responsible for developing the standard techniques of the internet (Cath & Floridi, 2017). It serves as an example of self-regulation within the internet due to its open nature, lack of formal structure, and flexible decision-making process based on rough consensus. Internet users take on increasing responsibility, and as a result, the internet functions as a self-regulating institution. This is achieved through the adoption of norms that are somewhat informal and are not intended to replace the law, but rather to work in conjunction with it.

The International Chamber of Commerce (ICC), a global business organization representing firms from all sectors worldwide, is a notable example of significant initiatives in corporate interests (Kelly, 2005). The International Chamber of Business (ICC) endorses the recently concluded United Nations Convention on the Use of Electronic Communications in International Contracts as a beneficial measure to promote the growth of cross-border online business in both developed and developing countries (Mostad-Jensen, 2019). The ICC contributed to the

convention's creation by collaborating with its Commission on Commercial Law and Practice and Commission on E-Business, IT and Telecoms. They provided professional input and shared business experiences related to electronic transactions. In addition, the ICC released the ICC eTerms 2004 as a self-regulatory supplement to the treaty.

3.2. LEGITIMACY REGARDING INTERNET REGULATIONS

In order to ensure the effective functioning of the information society, e-governance should implement legislative measures to regulate the internet (Nyman-Metcalf, 2014). Similarly, just as corporate governance must comply with financial security laws, e-governance cannot avoid adhering to legal texts and regulations in its administrative processes. The internet presents a novel approach to governance centered around the dynamic rules established by online communities (Nyman-Metcalf, 2014). Therefore, it should be recognized as a means to explore new opportunities for revitalizing political engagement and fostering individual autonomy. Law is perceived as a procedural mechanism in all these situations. Internet regulation involves the implementation of internal codes of conduct within communities. This regulation takes the form of a combination of self-regulation and hierarchical intervention, with regulatory laws being used to monitor and enforce compliance. Additionally, regulatory instruments signify the collaboration between the government and private entities. It is the responsibility of the national government to enforce the law regarding the distribution of unlawful content on the Internet, as what is illegal offline remains illegal online. Through self-regulation (such as codes of conduct and the establishment of hotlines) by and with the support of the legal system, the industry is viewed as playing a vital role in reducing the circulation of illegal content (especially content such as child pornography, racism, and antisemitism). In any case, e-governance must be intelligent to rapidly adapt to the regulatory needs resulting from the evolution of ICT in all disciplines, particularly new economics. In truth, it is crucial for e-government to identify the areas requiring Internet regulation and create the necessary rules. Otherwise, it risks killing or impeding the promotion's new positive aspect.

Government agencies should adopt legitimacy regarding internet-based administrative procedures. National and international regulations require strict rules for what can and cannot be done. The French law number 2001-420 of May 15, 2001, on new economic regulations allows directors, supervisors, and shareholders to participate and vote at meetings via electronic telecommunications, primarily Visio-conference and the internet. On May 3, 2002, Application Decree No. 2002-803 stated that the board of directors and supervisory counsels might meet even if their members are absent. The accountability principle applies because breaching these restrictions is possible, and courts may impose greater sanctions than money.

All European Commission, OCDE, and World Bank governance frameworks use the responsibility principle to link legitimacy with e-governance. The norms stem from decision-makers' responsibility to follow through. Harmonizing international institutions should make creating a global public order that requires all states' participation and accountability easier. Harmonization aims to bring advancement closer to cyberspace's most important regulations.

4. CONCLUSION

Research has examined the mechanism between e-government and e-governance in light of those mentioned above. Many e-governance case studies have been discussed. E-governance and E-government differences and benefits have been examined from a societal and government implementation perspective. This paper on e-governance mechanism deployment also examined

challenges and limitations. Finally, online administration and internet legislation addressed actual e-governance implementation concerns. Future research must quantitatively address legitimate issues and their linkage with e-governance and artificial intelligence in diverse public and private sector institutions.

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All authors contributed to Conceptualization; methodology; formal analysis and writing – original draft. All authors read and agreed to the published version of the manuscript.

CONFLICTS OF INTEREST

The authors declare that there are no conflicts of interest in relation to the research developed.

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